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Notice of Allowability

Application No.

10/073,830

Examiner

Cynthia Britt

Applicant(s)

FOLEA, RICHARD V.

Art Unit

2133

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 3/7/05.
2. ☒ The allowed claim(s) is/are 25-31.
3. ☒ The drawings filed on 11 February 2002 are accepted by the Examiner.
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☐ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☒ Interview Summary (PTO-413), Paper No./Mail Date 5/2/05.
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____.


ALBERT DECADY
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2100

EXAMINER'S AMENDMENT

An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it **MUST** be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Richard Folea Jr. on May 2, 2005.

The application has been amended as follows:

Claim 32 will be cancelled by this amendment.

Claim 25, currently reads,

A method for monitoring and controlling, from a host computer, the real-time logic state of a plurality of target devices in a boundary scan chain, comprising:

(a) displaying graphical representations of said target devices on a graphical display device connected to said host computer,

(b) running boundary scan operations on said target devices to collect information about said target devices and storing said information in said host computer for said displaying operation,

(c) updating said graphical representations with said information to visually indicate current real-time logic state of said target devices,

(d) initiating and running boundary scan operations via a method that frees the user from generating, preparing, or otherwise creating test vectors,

(e) initiating and running boundary scan operations via a method that frees the user from supplying test executives, whereby a human can view and manipulate a boundary scan enabled device via a graphical user interface.

Claim 25, as amended now reads:

A method for monitoring and controlling, from a host computer, the real-time logic state of a plurality of target devices in a boundary scan chain, comprising:

(a) displaying graphical representations of said target devices on a graphical display device connected to said host computer,

(b) running boundary scan operations on said target devices to collect information about said target devices and storing said information in said host computer for said displaying operation of graphical representation,

(c) updating said graphical representations with said information to visually indicate a current real-time logic state of said target devices,

(d) initiating and running boundary scan operations via a method that frees the user from generating, preparing, or otherwise creating test vectors,

(e) initiating and running boundary scan operations via a method that frees the user from supplying test executives, and

(f) whereby a human can view and manipulate a boundary scan enabled device via a graphical user interface.

Reasons for Allowance

The following is an examiner's statement of reasons for allowance:

The present invention pertains to a method of testing of integrated circuits and systems, and particularly to scan testing via a machine with an interactive user interface providing real-time monitoring and control of boundary scan enabled devices and systems.

The claimed invention (claim 25 as the only independent claim) recites such features as the steps of

(a) displaying graphical representations of said target devices on a graphical display device connected to said host computer,

(b) running boundary scan operations on said target devices to collect information about said target devices and storing said information in said host computer for said displaying of graphical representation,

(c) updating said graphical representations with said information to visually indicate a current real-time logic state of said target devices,

(d) initiating and running boundary scan operations via a method that frees the user from generating, preparing, or otherwise creating test vectors,

(e) initiating and running boundary scan operations via a method that frees the user from supplying test executives, and

(f) whereby a human can view and manipulate a boundary scan enabled device via a graphical user interface.

The prior arts of record (*JTAG Visualizer Makes Boundary Scan Visible Powerful Tool at DFT Assessment and Repair f PCB's* JTAG Technologies Press information release date November 6, 2001 as an example of such prior arts) teach a

device in which full graphical interpretation of boundary scan operations can be graphically displayed with results and user accessibility. The prior arts however, fail to teach "(c) updating said graphical representations with said information to *visually indicate a current real-time logic state of said target devices*, (d) initiating and running boundary scan operations via a method that *frees the user from generating, preparing, or otherwise creating test vectors*, and (e) initiating and running boundary scan operations via a method that *frees the user from supplying test executives*," As such, modification of the prior art of record can only be motivated by hindsight reasoning, or by changing the intended use and function of the prior art themselves. Therefore, it is not clear that one of ordinary skill in the art at the time of the invention would have made the necessary modifications to the prior art of record to encompass the limitations set forth in the present application. Moreover, none of the prior arts of record, taken either alone or in combination, anticipate nor render obvious the claimed inventions. Hence, claims 25-31 are allowable over the prior arts of record.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Cynthia Britt whose telephone number is 571-272-3815. The examiner can normally be reached on Monday - Thursday.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Albert Decady can be reached on 571-272-3819. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


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